in U. S. National Museum, from San Diego, Tex. Genus a synonym of *Picroscytus* Thomson, according to Crawford (Can. Ent. **41**: 98. 1909). *Picroscytus* Thomson is a synonym of *Artholysis* Foerster, according to Gahan and Fagan (U. S. Nat. Mus. Bull. **124**: 115. 1923).

*Tachardiaephagus thoracicus* Ashmead: 303, 390. Type in U. S. National Museum, from Ceylon. Generic and specific synonymy, references, and descriptive notes given by Ferriere (Bull. Ent. Res. **19**: 171. 1928).

*Tachinaephagus zealandicus* Ashmead: 304, 390. Type in U. S. National Museum, from Queanbeyan, New South Wales, Australia. Generic and specific synonymy discussed by Gahan (Proc. Ent. Soc. Washington **40**: 210. 1938).

*Trichencyrtus chapadae* Ashmead: 291, 392, 495. Type in collection of Carnegie Museum, from Chapada, Brazil. The type is labeled *T. robustus*, but evidently it is the specimen intended as the genotype and referred to on page 291 as *chapadae*. (See Gomes, Bol. Soc. Brasil Agronomia **5**: 287. 1942.)

*Trigonogastra auratus* Ashmead: 330, 392. Type in U. S. National Museum. This type bears only the label "Ac. Cat. 595A," but it is believed to have been from Lansing, Mich.

*Tropidogastra arizonensis* Ashmead: 323, 392. Type in U. S. National Museum, from Santa Rita Mountains, Ariz. Type redescribed as *Dinarmus arizonicus* Girault (Insecutor Inscitiae Menstruus **4**: 109. 1916). Genus synonymized with *Cheiropachus* Westwood by Gahan (Proc. Ent. Soc. Washington **40**: 220. 1938).

*Uroderostenus pleuralis* Ashmead: 343, 392, 511. Type lost; from St. Vincent, West Indies (H. H. Smith, collector). The type was originally deposited in the U. S. National Museum, but only the empty pin remains.

*Xanthoatomus albipes* Ashmead: xi, 360. Type in U. S. National Museum, from Washington, D. C. Although he published the name, Ashmead apparently never placed the name label on any specimens, but certain specimens previously standing under the generic name in the U. S. National Museum collection, as arranged by Ashmead, were without much doubt the ones to which he intended to apply the name. These specimens were remounted on slides and studied by A. A. Girault, who identified them as *Pentarthron minutum* (Riley) (Bull. Wisconsin Nat. Hist. Soc. **9**: 155. 1911), now known as *Trichogramma minutum* (Riley). Records of the Bureau of Entomology and Plant Quarantine show that these specimens were reared from eggs of *Hyphantria textor* Harris collected in the vicinity of Washington, D. C., August 18, 1883. Since these specimens are believed to be the Ashmead types and since Girault's identification appears to be correct, the genus *Xanthoatomus* Ashmead should be considered a synonym of *Trichogramma* Westwood, and the species *X. albipes* a synonym of *T. minutum* (Riley).

## MAMMALOGY.—*A new Philippine rat allied to* "Bullimus" bagobus *Mearns.*[1]

DAVID H. JOHNSON. (Communicated by HERBERT FRIEDMANN.)

On the basis of a single specimen from Todaya, at 4,000 feet altitude on Mount Apo, southern Mindanao, Mearns (1905, p. 450) founded a new genus and species of rat, *Bullimus bagobus*. Thomas (1907, p. 141) recorded a second specimen from 3,000 feet altitude on the same mountain and synonymized *Bullimus* under the then broad genus *Mus*. Apparently no further specimens have been recorded. *Bullimus* has been treated subsequently as a valid genus by Hollister (1912, p. 30; 1913, p. 324) and by Taylor (1934, p. 411), and as a synonym of *Rattus* by Ellerman (1931, pp. 148, 159).

Surveys of rodents conducted in 1945 and 1946 by units of the Medical Department of the U. S. Navy in the vicinity of Guiuan, southeastern Samar Island, revealed the presence there of a closely related subspecies. The first specimen was taken at Mercedes on March 7, 1945, by Lt. Jesse E. Barker, U.S.N.R., and was added by him to a collection being made by an advance part of Naval Medical Research Unit no. 2. Subsequently Lt. (jg) Willard W. Lahnum, U.S.N.R., working in cooperation with Epidemiology Unit no. 61, collected additional specimens near Mercedes and on nearby Calicoan Island.

[1] Received July 25, 1946.

Six specimens have thus come to the United States National Museum, where they been compared with the type specimen of *bagobus*.

### Rattus bagobus barkeri, n. subsp.

*Type specimen.*—U.S.N.M. no. 278141, young adult male, skin and skull, collected March 7, 1945, by Jesse E. Barker, prepared by D. H. Johnson, original no. 276.

*Type locality.*—Village of Mercedes, 5 miles north of Guiuan, southeastern Samar Island, Philippine Islands. Altitude about 200 feet. (See Fig. 1.)

*Diagnosis.*—Differing from *Rattus bagobus bagobus* in smaller size, sparser and less woolly pelage, predominantly gray (rather than whitish) underparts, relatively broader and more angular skull, larger audital bullae, narrower interbullar space, and smaller molar teeth.

*Characters.*—Size large; tail shorter than head and body; males larger than females (see Table 1). Ears large, rounded, and leathery, practically naked on both surfaces. Scales near base of tail in 9 annular rows per centimeter. Hind foot broad, sole bare to heel, tarsal part elongate, toes relatively short and stubby.

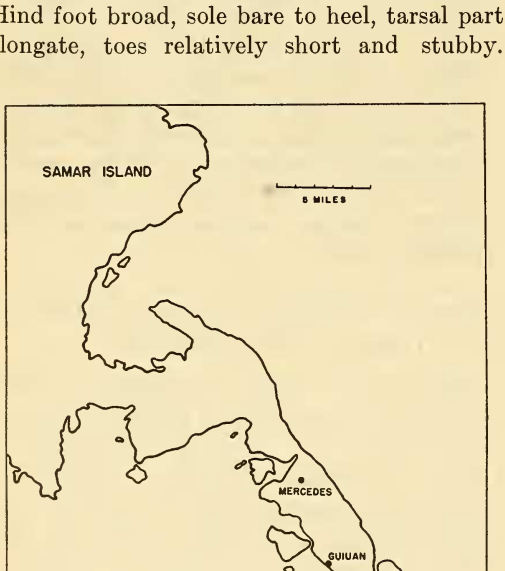


FIG. 1.—Map of the southeastern part of Samar Island, showing localities mentioned in the text.

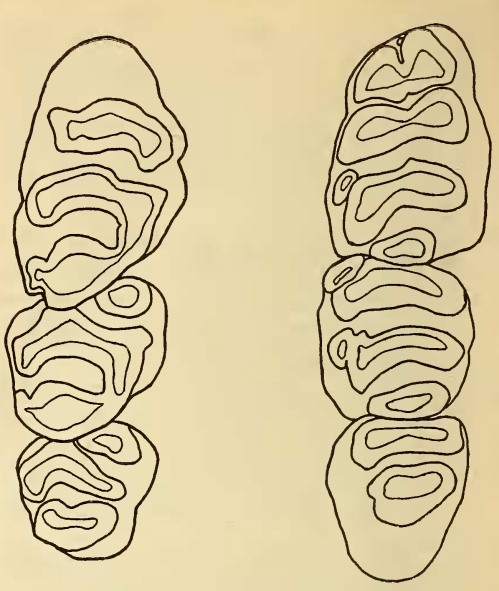


FIG. 2.—Occlusal surfaces of (*A*) right upper and (*B*) left lower molar teeth of *Rattus bagobus barkeri*, n. subsp., type specimen. ×6.

Mammary formula (in type of *bagobus* and three females of *barkeri*) 1–3 = 8.

Color of type specimen (capitalized color terms are from Ridgway, 1912): Upperparts in general Bister, in detail a mixture of black and Sayal Brown; sides paler than back, with Pinkish Cinnamon to Cinnamon hair tips underlain by Neutral Gray basal color; underparts Drab (mottled on throat and chest with Army Brown patches, which are thought to be adventitious stains); chin whitish; tail black above and below and completely to the tip (with considerable reddish-brown discoloration from the predominating coral clay of the region); feet blackish with a sprinkling of short silvery hairs; vibrissae black, extending back beyond ear. Old adult specimens are darker, near Vandyke Brown or Bone Brown on the midback; the underparts in no. 282149 are unusually pale, the hairs silvery to the base, with a variable reddish tinge resulting at least in part from adventitious staining; in no. 282146 the terminal 18 mm of the tail is yellowish white.

Skull with elongate rostrum and prolonged frontal region; nasals ending anterior to level of lacrymal processes; temporal ridges well developed, with pronounced angle at fronto-

parietal suture; incisive foramina ending anterior to root of $M^1$; palate narrow, ending opposite posterior edge of $M^3$; greatest zygomatic breadth opposite frontoparietal suture; bullae large and inflated, each with a dentlike depression on its outer side; molar pattern essentially as in type specimen of *bagobus:* upper molars with outer row of cusps reduced; no outer cusps on first lamina of $M^2$ and $M^3$; external accessory cusps anterior to third lamina of $M_1$ and first and second laminae of $M_2$ (Fig. 2).

*Measurements.*—See Table 1.

*Distribution.*—Known only from the extreme southeastern peninsula of Samar Island and from adjacent Calicoan Island (Fig. 1).

*Remarks.*—Other rats trapped in the vicinity of Guiuan were *Rattus everetti*, *R. mindanensis*, and a member of the *Rattus exulans* group; these were abundant in the casually cultivated coconut-grove and yam-patch association that characterizes the low-lying inhabited parts of the area. In contrast, *Rattus bagobus* seemed to prefer the vicinity of the native jungle, most of which was confined to the elevated coral ridges. The type specimen was taken at a place where the two associations meet, and according to information supplied by Lieutenant Lahnum, his specimens were all taken in the high forested country.

This species seems to be a specialized member of the *Rattus xanthurus* group, which is limited geographically to Celebes and the Philippine Islands. Other Philippine species of the group (see Ellerman, 1941, p. 190) are *albigularis*, *everetti*, *gala*, *luzonicus*, and *tagulayensis;* with these I should also place *Rattus tyrannus* Miller of Ticao Island, which has been erroneously assigned to the *Rattus norvegicus* group by Taylor (1934, p. 427) and Ellerman (1941, p. 184). All these species are represented in the U. S. National Museum, either by types or by referred specimens. From all of them *Rattus bagobus* differs in its usually unicolored tail and its elongate rostrum. The nearest relative seems to be *Rattus luzonicus* from Mount Data, Luzon, but the latter has much smaller bullae and

TABLE 1.—MEASUREMENTS IN MILLIMETERS OF SPECIMENS OF THE TWO SUBSPECIES OF RATTUS BAGOBUS

| Specimen and locality | Head and body | Tail | Hind foot | Ear, from notch | Condylobasal length | Length of nasals | Zygomatic breadth | Interorbital breadth | Depth of rostrum | Length of incisive foramina | Length of auditory bullae | Length of upper molar row | Length of lower molar row |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. 278141 (♂) Mercedes, Samar *barkeri*, type | 236 | 187 | 53 | 28 | 54.1 | 23.1 | 26.8 | 7.6 | 10.7 | 9.9 | 10.7 | 9.1 | 9.4 |
| No. 282149 (♂) Mercedes, Samar *barkeri* | 267 | 178 | 51 | — | 57.4 | 24.4 | — | 7.5 | 11.0 | 11.3 | 10.4 | 9.1 | 9.5 |
| No. 282148 (♂) Calicoan I., Samar *barkeri* | 254 | 191 | 54 | — | 58.6 | 25.3 | — | 7.9 | 10.8 | 10.6 | 11.0 | 9.2 | 9.4 |
| No. 282145 (♀) Calicoan I., Samar *barkeri* | 250 | 200 | — | — | — | 23.7 | — | 7.9 | 10.4 | 10.7 | — | — | — |
| No. 282146 (♀) Calicoan I., Samar *barkeri* | 269 | 175 | 50 | — | — | — | — | — | — | — | — | — | — |
| No. 282147 (♀) Calicoan I., Samar *barkeri* | 213 | 162 | 48 | — | 51.5 | 21.4 | 25.4 | 7.3 | 10.1 | 9.3 | 10.3 | 7.8 | 7.9 |
| No. 125248 (♀) Mt. Apo, Mindanao *bagobus*, type | 275[1] | 128[2] | 54 | — | 53.6 | 23.6 | 26.7 | 7.2 | 9.9 | 10.7 | 9.9 | 9.6 | 9.4 |

[1] External measurements from Mearns (1905, p. 451), made on dry study skin.
[2] Tail apparently incomplete.

larger molar teeth. There are no satisfactorily constant characters by which "*Bullimus*" can be retained.

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